

REMARKS/ARGUMENTS

Interview Summary

Telephonic conversations were conducted with the Examiner, Jonathan Harper, by the Applicants' representative, Rabindranath Dutta. Reg. No. 51,010 based on certain proposed claim amendments faxed to the Examine, Jonathan Harper on May 17, 2007.

The arguments and amendments submitted herein incorporate the patentability arguments and amendments Applicants discussed/communicated with the Examiner. Applicants submit that the amendments and arguments presented herein make the substance of the discussions/interview(s) of record to comply with 37 CFR 1.133. If the Examiner believe that further information on the interview(s) needs to be made of record to comply with the requirements, Applicants request the Examiner to identify such further information.

Claims are amended for expeditious prosecution

This amendment is being filed in response to the final office action dated 3/22/2007. In the current amendment, Applicants have amended at least the independent claims 1, 11, 21, 31. Applicants are not conceding in this Application that these and/or other amended and/or cancelled claims are not patentable over the art cited by the Examiner, as the present claim amendments and/or cancellations are only for facilitating expeditious prosecution of the application. Applicants respectfully reserve the right to pursue these and other claims, including the original claims, in one or more continuations and/or divisional patent application

Claim Rejections

The Examiner has rejected claims 1-33 under 35 U.S.C. 103(a) as being unpatentable over Delphi 4 Unleashed Chapter 3 (referred to as "Polymorphism" by the Examiner) in view of US 20040039745 (referred to as "Evans" by the Examiner). Applicants have amended the independent claims 1, 11, 21, 31, and canceled claims 7, 17, 27 and traverse the rejection of pending claims 1-6, 8-16, 18-26, 28-33.

Amended Independent claims 1, 11, 21, 31

Independent claims 1, 11, 21, 31 require managing devices by:
receiving, by a proxy, a request implemented via at least one device independent class;

traversing, by the proxy, a class hierarchy database to determine at least one device specific class that corresponds to the at least one device independent class, wherein the class hierarchy database stores a class hierarchy and associations between classes;

modifying, by the proxy, the received request, wherein in the modified request the least one device independent class has been translated to the at least one device specific class;

generating a device specific request in a device specific language; and

sending the device specific request in the device specific language to a managed device coupled to the proxy, wherein the proxy is a computational device.

The new requirements of receiving, traversing, and modifying by the proxy, generating a device specific request in a device specific language, sending the device specific request in the device specific language to a managed device coupled to the proxy, wherein the proxy is a computational device, may be found in at least original claim 7 of the Application and in at least paragraph 14 of the Application where it is mentioned that the proxy is a computational device.

The Examiner has rejected original independent claims 1, 11, 21, 31 under 35 U.S.C. 103(a) as being unpatentable over Polymorphism in view of Evans. Some of the requirements of original dependent claims 7, 17, 27 may now be found in the amended independent claims 1, 11, 21, 31 in addition to other requirements.

Applicants submit that nowhere does the cited Polymorphism or the cited Evans, either alone or in combination, teach or suggest the newly added claim requirements of receiving, traversing, and modifying by the proxy, generating a device specific request in a device specific language, and sending the device specific request in the device specific language to a managed device coupled to the proxy, wherein the proxy is a computational device.

In rejecting original dependent claims 7, 17, 27 the Examiner had mentioned in page 14 of the office action that the requirements of receiving, traversing, and modifying by the proxy were not given patentable weight because of the occurrence of the requirements of receiving, traversing, and modifying by the proxy being in the preamble of original dependent claims 7, 17, 27. Applicants submit that in the amended independent claims 1, 11, 21, 31 the receiving, traversing, and modifying by the proxy are no longer in the preamble.

Additionally, the Examiner had in the office action mentioned that paragraph 159 of the cited Evans discloses the claim requirement of generating a device specific request in a device

specific language, and sending the device specific request in the device specific language to a managed device coupled to the proxy. Paragraph 159 of the cited Evans is as follows:

“In order to manage/monitor devices the device characteristics are represented using a format known to both the Agent and the NMS. These characteristics can represent properties of physical entities such as fan speeds, or services such as routing tables. In an example of the invention, they can also implement logical entities such as services that can be managed. The data structure defining these characteristics is known as a Management Information Base (MIB). This data model is typically organized into tables, but can also include simple values. An example of the former is routing tables, and an example of the latter is a timestamp indicating the time at which the agent was started.”

Nowhere does the cited paragraph 159 of the cited Evans teach or suggest the claim requirement of proxy as required by the claims, and wherein the proxy is a computational device as required by the claims. Instead, the paragraph 159 of the cited Evans discusses an agent, an NMS, and a management information base. In order to manage/monitor devices the device characteristics are represented using a format known to both the Agent and the NMS. These characteristics can represent properties of physical entities such as fan speeds, or services such as routing tables. In an example, they can also implement logical entities such as services that can be managed. The data structure defining these characteristics is known as a Management Information Base (MIB). This data model is typically organized into tables, but can also include simple values. An example of the former is routing tables, and an example of the latter is a timestamp indicating the time at which the agent was started. While there is extensive discussion of the Agent and NMS in the cited paragraph 159 of the cited Evans nowhere does the cited paragraph 159 of the cited Evans teach or disclose the claim requirement of receiving, traversing, and modifying by the proxy, generating a device specific request in a device specific language, sending the device specific request in the device specific language to a managed device coupled to the proxy, wherein the proxy is a computational device. The Examiner has in page 14 of the office action mentioned that the agent of the cited Evans “acts as a go between and automate computer activities which is a proxy for purposes of broad interpretation”. Applicants respectfully draw the attention of the Examiner to paragraph 158 of the cited Evans, where it is described that a device has an SNMP Agent associated with it, wherein the agent is responsible for receiving requests for data representing the state of the device from the NMS and providing

an appropriate response. The Agent can also accept data from the NMS in order to allow control of the state of the device. Additionally, the Agent can generate SNMP Traps, which are unsolicited messages sent to selected NMS(s) to signal significant events relating to the device.

Applicants submit that the agent of the cited Evans is an SNMP agent associated with a device, wherein the agent can accept data from the NMS to allow control of the state of the device and wherein the Agent can generate SNMP Traps, which are unsolicited messages sent to selected NMS(s) to signal significant events relating to the device. The proxy of the claim requirements wherein the proxy is a computational device as required by the claims is different from the agent of the cited Evans. Without restricting the scope of the claims, Applicants draw the attention of the Examiner to FIG. 1 of the Application wherein a proxy is shown and request the Examiner to indicate how the agent of the cited Evans can correspond to the proxy (the proxy is a computational device), of the claim requirements. Additionally, the agent of the cited Evans does not perform the receiving, traversing and modifying as required by the claims, and also does not perform the generating of a device specific request in a device specific language and sending the device specific request in the device specific language to a managed device coupled to the proxy as required by the claims.

For the above reasons, the cited Evans or the cited Polymorphism either alone or in combination do not teach or suggest the claim requirements of receiving, traversing, and modifying by the proxy, generating a device specific request in a device specific language, and sending the device specific request in the device specific language to a managed device coupled to the proxy, wherein the proxy is a computational device.

For the above reasons claims 1, 11, 21, 31 are patentable over the cited art.

Certain additional arguments provided earlier by the Applicants are given below.

Applicants submit that nowhere does the cited Polymorphism (page 4, lines 21-25; page 5, lines 5-9) or the cited Evans (Abstract, paragraphs 8, 11, 175), either alone or in combination, teach or suggest the claims requirements of traversing a class hierarchy database to determine at least one device specific class that corresponds to the at least one device independent class.

The Examiner has mentioned that page 4, lines 21-23 of the cited Polymorphism discloses the claim requirement of traversing a class hierarchy database to determine at least one device specific class that corresponds to the at least one device independent class. Applicants respectfully submit that the cited Polymorphism discusses how a method on an object can be

allowed to act in many different ways. For example, one object , called shape may “morph” from one functionality to another, depending on the context of the call. Polymorphism discusses a series of objects which descend from one base class and respond to the same virtual command to produce different outcomes. However, nowhere does the cited Polymorphism teach or suggest the claim requirements of:

- (i) at least one device independent class
- (ii) at least one device specific class that corresponds to the at least one device independent class.

In the cited Polymorphism (Page 3; section entitled “A Simple Example of Polymorphism”), the four objects TRectangle, TEllipse, TCircle and Tsquare objects are each a descendant of a base class called TShape. However, the cited Polymorphism does not teach or suggest the claim requirements of at least one device independent class and at least one device specific class that corresponds to the at least one device independent class. The four objects TRectangle, TEllipse, TCircle and Tsquare objects are each a descendant of a base class called TShape and there is no teaching or suggestion in the cited Polymorphism of at least one device independent class and at least one device specific class that corresponds to the at least one device independent class.

Additionally, nowhere is there any teaching or suggestion in the cited Polymorphism of traversing a class hierarchy database. While the cited Polymorphism may discuss that a method of an object can act in many different ways there is no teaching or suggestion of the claim requirements of traversing a class hierarchy database. Should the Examiner continue to maintain the rejection the Examiner is further requested to indicate where the cited Polymorphism teaches or suggests the claim requirement of traversing a class hierarchy database.

In fact the cited Polymorphism teaches away from the claim requirements of at least one device independent class and at least one device specific class that corresponds to the at least one device independent class because the cited Polymorphism discusses on page 5, lines 11-12: “....you can use an object of a single type yet have it behave in many different ways”. Therefore, the cited Polymorphism is related to the usage of an object of a single type in many different ways, whereas the claims require at least one device independent class and at least one device specific class that corresponds to the at least one device independent class, wherein the class hierarchy is traversed to determine the at least one device specific class.

For the above reasons claims 1, 11, 21, 31 are patentable over the cited art.

Dependent claims 2-6, 8-10, 12-16, 18-20, 22-26, 28-30, 32-33

Additionally, claims 2-6, 8-10, 12-16, 18-20, 22-26, 28-30, 32-33 depend directly or indirectly on the pending independent claims 1, 11, 21, 31. Applicants submit that these claims are patentable over the cited art because they depend from claims 1, 11, 21 and 31 which are patentable over the cited art for the reason discussed above, and because the combination of the limitations in the dependent claims and the base and intervening claims from which claims 2-6, 8-10, 12-16, 18-20, 22-26, 28-30, 32-33 depend provide further grounds of distinction over the cited art.

Dependent claims 2, 12, 22, 32

Dependent claims 2, 12, 22, 32 depend on claims 1, 11, 21, 31 respectively and further require:

mapping at least one device independent class attribute to at least one device specific class attribute in the modified request;

mapping at least one device independent property to at least one device specific property in the modified request;

generating the device specific request from the modified request, in response to mapping the at least one device independent class attribute and the at least one device independent property; and

sending the device specific request to the managed device, wherein the proxy couples a plurality of hosts to a plurality of managed devices that includes the managed device.

The new requirements that the proxy couples a plurality of hosts to a plurality of managed devices that includes the managed device may be found in at least FIG. 1 of the Application.

Applicants submit that nowhere does the cited Evan or the cited Polymorphism teach or suggest the newly added claim requirements that the proxy couples a plurality of hosts to a plurality of managed devices that includes the managed device.

The Examiner has mentioned that paragraph 177 of the cited Evans discloses the claim requirements of mapping at least one device independent class attribute to at least one device specific class attribute in the modified request. Applicants submit that paragraph 177 of the cited

Evans discusses “a novel mapping of the managed physical and logical objects and their associations”. Nowhere does the cited Evans teach or suggest claim requirement of the mapping of at least one device independent class attribute to at least one device specific class attribute.

The Examiner has also mentioned that paragraph 175 of the cited Evans discloses the claim requirement of mapping at least one device independent property to at least one device specific property in the modified request. Applicants submit that paragraph 175 of the cited Evans discusses a common information model (CIM) in which the schema models “physical and logical entities, as well as associations”, where the associations are “between logical and physical entities.” Nowhere does the cited Evans teach or suggest the claim requirements of mapping at least one device independent property to at least one device specific property.

For the above reasons claims 2, 12, 22, 32 are patentable over the cited art.

Dependent claims 3, 13, 23

Dependent claims 3, 13, 23 depend on claims 1, 11, 21 respectively and require: further modifying the received request to include at least one association between device specific classes in the class hierarchy.

Paragraph 211 of the cited Evans that has been used in rejecting claims 3, 13, 23 discuss associations that “define a mapping between a logical device and a physical component that implements the device.” However, nowhere does the cited paragraph 211 of the cited Evans teach or suggest modifying the received request to include at least one association between device specific classes in the class hierarchy.

For the above reasons claims 3, 13, 23 are patentable over the cited art.

Dependent claims 4, 14, 24, 33

Dependent claims 4, 14, 24, 33 depend on claims 1, 11, 21, 31 respectively, wherein the received request indicates a source class and a requested class, and further require:

determining a specific association between a first device specific class that corresponds to the source class and a second device specific class that corresponds to the specific class, wherein the specific association corresponds to a managed device.

The claims require that the received request indicate a source class and a requested class and nowhere does the cited Polymorphism or the cited Evans teach or suggest these claim requirements.

The Examiner has mentioned that page 6 of the cited Polymorphism discusses the claim requirement that the received request indicates a source class and a requested class. Applicants respectfully submit that the cited Polymorphism discusses a series of objects which descend from one base class, but does not teach or suggest the claim requirement of a source class and a requested class. The Examiner mentions a “parent class” and that child requests are “made to functions of the parent class.” The Examiner is requested to indicate which element of the cited Polymorphism is the source class and which element is the requested class.

For the above reasons claims 4, 14, 24, 33 are patentable over the cited art.

Dependent claims 5, 15, 25

Claims 5, 15, 25 depend on claims 4, 14, 24 respectively, wherein the source class represents storage pools and the requested class represents storage volumes corresponding to a storage pool.

The cited paragraph 178 of the cited Evans discusses managed devices and entity specific information and associations between logical and physical entities. However nowhere does the cited Evans teach or suggest the claim requirement that the source class represents storage pools and the requested class represents storage volumes corresponding to a storage pool.

For the above reasons claims 5, 15, 25 are patentable over the cited art.

Dependent claims 6, 16, 26

Claims 6, 16, 26 depend on claims 1, 11, 21, wherein the received request indicates a source class and a base association and further requires:

determining a first device specific class from the class hierarchy database, wherein the first device specific class has a specific association with a second device specific class that corresponds to the indicated source class, and wherein the specific association corresponds to the base association.

The cited paragraph 11 of the cited Evans discusses a base index and an association in which a physical entity realizes a logical entity. However, nowhere does the cited Evans teach or

suggest the claim requirements of a base association wherein the specific association corresponds to the base association.

For the above reasons claims 6, 16, 26 are patentable over the cited art.

Conclusion

For all the above reasons, Applicant submits that the pending claims are patentable over the art of record. Should any additional fees beyond those indicated be required, please charge Deposit Account No. 09-0466.

The attorney of record invites the Examiner to contact him at (310) 557-2292 if the Examiner believes such contact would advance the prosecution of the case.

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